



11/27/96

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SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:

Bazin, Hervé

Latinne, Dominique

Kaplan, Ruth

Kieber-Emmons, Thomas

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(ii) TITLE OF INVENTION: LO-CD2a Antibody and Uses
Thereof for Inhibiting
T-Cell Activation and
Proliferation

(iii) NUMBER OF SEQUENCES: 96

(iv) CORRESPONDENCE ADDRESS:

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(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: 3.5 inch diskette

(B) COMPUTER: IBM PS/2

(C) OPERATING SYSTEM: MS-DOS

(D) SOFTWARE: WordPerfect 5.1

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: 08/477,989

(B) FILING DATE: 07-JUN-1995

(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: 08/407,009

(B) FILING DATE: 29-MAR-1995

(A) APPLICATION NUMBER: 08/119,032

(B) FILING DATE: 09-SEP-1993

(A) APPLICATION NUMBER: 08/027,008

(B) FILING DATE: 05-MAR-1993

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(C) REFERENCE/DOCKET NUMBER: 61750-147

(ix) TELECOMMUNICATION INFORMATION:

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(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

B1
AACCCGGGGA CATTGAGCTG ACCGAGTCTC AA

32

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

CAGTCGACTA CAGTTGGTGC AGCATCAGC

29

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 31 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

BI AACCCGGGGA GGTCCAGCTG CAGCAGTCTG G

31

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 27 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

AAGTCGACCC AGTGGATAGA CCGATGG

27

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

CCGCAAGCTT CATGGGATGG AG

22

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 27 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

GCTGCTTGGG GACTGGGTCA GCTGGAT

27

(2) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

ATTTCAGCTGA CCCAGTCTCC A

21

(2) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 58 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

GATCGGATCC ACCTGAGGAA GCAAAGTTTA AATTCTACTC ACGTTTCAGT TCCAGCTT

58

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 31 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

TCTCCTGCAG TGGGACCTCG GAGTGGACAC C

31

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

GAGGTCCAGC TGCAGCAGTC T

21

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

161 CGATGTATCA GCTGTCAGTG TGGC

24

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GCCCACTGA CAGCTGATAC ATCG

24

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

CAGAGTGCCT TGGCCCCAGT A

21

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 27 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

TACTGGGGCC AAGGCACCCT CGTCACA

27

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

GATCGGATCC CTATAAATCT CTGGC

25

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 43 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

TTGGATCCGC GGCCGCGTCG ACTACAGTTG GTGCAGCATC AGC

43

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 41 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

ATGGATCCGC GGCCGCGTCG ACCCAGTGA TAGACCGATG G

41

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 31 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

CCATGGCCTC GAGGGCCCCC CCCCCCCCC C

31

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

B1
CCTGTTTAGG CCTCTGCTTC ACCCAGTAC

29

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

GGATAATGGG TAAATTGCAT GCAGTAATA

29

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

B1 TGCAAGCTTC ATGATGAGTC CTGTCCAGTC

30

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 28 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

AGTAAGCTTC ATGAAATGCA GGTGGATC

28

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

B1
(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

GGGAGATTGC TGCAGCTGGA CTTC

24

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 33 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

GATCCCCGGG CCACCATGAT GAGTCCTGTC CAG

33

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 61 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

AGAATGGCCA CGTCATCCGA CCCCCTCAGA GTTTACTATT CTACTATCCA ACTGAGGAAG

60

C

61

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 34 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

GATCGAATTC GCCACCATGA AATGCAGGTG GATC

34

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

CCAGAAAGCT AGCTTGCCAT CCCTATAAAT CTCTGGC

37

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Asp Val Val Leu Thr Gln Thr Pro Pro Thr

5

10

Leu Leu Ala Thr Ile Gly Gln Ser Val Ser

15

20

Ile Ser Cys

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

Asp Val Val Met Thr Gln Ser Pro Leu Ser

5 10

Leu Pro Val Thr Leu Gly Gln Pro Ala Ser

15 20

Ile Ser Cys

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Trp Leu Leu Gln Arg Thr Gly Gln Ser Pro

5 10

Gln Pro Leu Ile Tyr

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

B1
Trp Phe Gln Gln Arg Pro Gly Gln Ser Pro

5

10

Arg Arg Leu Ile Tyr

15

(2) INFORMATION FOR SEQ ID NO: 32:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

Gly Val Pro Asn Arg Phe Ser Gly Ser Gly

5

10

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser

15

20

Gly Val Glu Ala Glu Asp Leu Gly Val Tyr

25

30

Tyr Cys

(2) INFORMATION FOR SEQ ID NO: 33:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly

5

10

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser

15

20

Arg Val Glu Ala Glu Asp Val Gly Val Tyr

25

30

Tyr Cys

(2) INFORMATION FOR SEQ ID NO: 34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys

5

10

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 10 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

5

10

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 81 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

GCAAGAGATG GAAGCTGGTT GTCCCAAGGT TACCAATAAT GAAGGTGGAC TCTGGGTCAT 60
CACAACATCA CCATTGGTTC C 81

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

CAACCAGCTT CCATCTCTTG CAGGTCAAGT CAGAGTCTCT TACATAGTAG TGGAAACACC 60
TATTTAATT GG 72

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 81 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

AGATTCCAGT TTGGATACCA AATAAATTAG CGGCTGTGGA GATTGGCCTG GCCTTAGCAA 60
CCAATT TAAA TAGGTGTTTC C 81

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 81 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

TTGGTATCCA AACTGGAATC TGGGGTCCCC GACAGGTTCA GTGGCTCAGG GAGTGAACA 60
GATTTACAC TCAAAATCAG T 81

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

ATGGGTAAAT TGCATGCAGT AATAAACCCC CACATCCTCA GCTTCCACTC CACTGATTTT 60
GAGTGTGAAA TC 72

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 63 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

TACTGCATGC AATTTACCCA TTATCCGTAC ACGTTTGGAC AAGGGACCAA GCTGGAAATC 60
AAA 63

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 67 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

GATCGGATCC AACTGAGGAA GCAAAGTTTA AATTCTACTC ACGTTTGATT TCCAGCTTGG 60
TCCCTTG 67

(2) INFORMATION FOR SEQ ID NO: 43:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

GATCAAGCTT CATGATGAGT CCT 23

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

GCAAGAGATG GAAGCTGGTT G

21

(2) INFORMATION FOR SEQ ID NO: 45:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

CAACCAGCTT CCATCTCTTG C

21

(2) INFORMATION FOR SEQ ID NO: 46:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

AGATTCCAGT TTGGATACCA A

21

(2) INFORMATION FOR SEQ ID NO: 47:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

TTGGTATCCA AACTGGAATC TGGG

24

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

ATGGGTAAAT TGCATGCAGT AATA

24

- (2) INFORMATION FOR SEQ ID NO: 49:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 24 bases
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: oligonucleotide
 - (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

TACTGCATGC AATTACCCA TTAT

24

- B1
- (2) INFORMATION FOR SEQ ID NO: 50:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 bases
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: oligonucleotide
 - (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

GATCGGATCC AACTGAGGAA GCAAAG

26

- (2) INFORMATION FOR SEQ ID NO: 51:
- (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu

5 10

Leu Gln Arg Pro Gly Ala Ser Val Lys Leu

15 20

Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr

25 30

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

Gln Val Gln Leu Val Gln Ser Gly Ala Glu

5 10

Val Lys Lys Pro Gly Ala Ser Val Lys Val

15 20

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr

25

30

(2) INFORMATION FOR SEQ ID NO: 53:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

BI Trp Val Lys Gln Arg Pro Lys Gln Gly Leu

5

10

Glu Leu Val Gly

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

Trp Val Arg Gln Ala Pro Gly Gln Gly Leu

5

10

Glu Trp Met Gly

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

B1
Lys Ala Thr Leu Thr Ala Asp Thr Ser Ser

5 10

Asn Thr Ala Tyr Met Gln Leu Ser Ser Leu

15 20

Thr Ser Glu Asp Thr Ala Thr Tyr Phe Cys

25 30

Ala Arg

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Arg Val Thr Met Thr Arg Asp Thr Ser Ile

5 10

Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu

15 20

Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys

25 30

Ala Arg

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

Trp Gly Gln Gly Thr Leu Val Thr Val Ser

5 10

Ser

(2) INFORMATION FOR SEQ ID NO: 58:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Trp Gly Gln Gly Thr Leu Val Thr Val Ser

5

10

Ser

(2) INFORMATION FOR SEQ ID NO: 59:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 88 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

GATCAAGCTT CATGAAATGC AGGTGGATCA TCCTCTTCTT GATGGCAGTA GCTACAGGTA

60

AGGCACTCCC AAGTCGTAAA CTTGAGA

88

(2) INFORMATION FOR SEQ ID NO: 60:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 87 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

CACCTGTGAG TTGACCCCTG TTGAAAGAAA TCCAAAGATA GTGTCCTGT CTCCCAAGTG 60

TATGATCTCT CAAGTTTAGG ACTTGGG 87

(2) INFORMATION FOR SEQ ID NO: 61:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

ACAGGGGTCA ACTCACAGGT GCAGCTGGTG CAGTCTGGGG CTGAGGTGAA GAAGCCTGGG 60

GCCTCAGTGA AGGTCTCC 78

(2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

GGCCTGTCGC ACCCAGTACA TATAGTACTC GGTGAAGGTG TATCCAGAAG CCTTGCAGGA 60
GACCTTCACT GAGGCCCC 78

(2) INFORMATION FOR SEQ ID NO: 63:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

ATGTACTGGG TGCGACAGGC CCCTGGACAA GGGCTTGAGC TGATGGGAAG GATCGATCCT 60
GAAGACGGTA GTATTGAT 78

(2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

TGTGCTAGAG GACGTGTCAG CGGTCAGGGT GACCTTTTTC TTAAACTTCT CAACATAATC 60
AATACTACCG TCTTCAGG 78

(2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 84 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

GCTGACACGT CCTCTAGCAC AGCCTACATG GAGCTGAGCA GCCTGACCTC TGACGACACG 60
GCCGTGTATT ACTGTGCGAG AGGA 84

(2) INFORMATION FOR SEQ ID NO: 66:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 87 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

GGACTCACCT GAGGAGACGG TGACCAGGGT TCCTTGGCCC CAGTAAGCAA ACCTATAGTT 60

AAACTTTCCT CTCGCACAGT AATACAC 87

(2) INFORMATION FOR SEQ ID NO: 67:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 69 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

ACCGTCTCCT CAGGTGAGTC CTTACAACCT CTCTCTTCTA TTCAGCTTAA ATAGATTTTA 60

CTGCATTTG 69

(2) INFORMATION FOR SEQ ID NO: 68:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 69 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

CCTAGTCCTT CATGACCTGA AATTCAGATA CACACATTTT CCCCCCAACA AATGCAGTAA 60
AATCTATTT 69

(2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

TTCAGGTCAT GAAGGACTAG GGACACCTTG GGAGTCAGAA AGGGTCATTG GGAGCCCGGG 60
CTGATGCAGA CA 72

(2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

GATCGGATCC CTATAAATCT CTGGCCATGA AGTCTGGGAG CTGAGGATGT CTGTCTGCAT 60
CAGCCCGGGC TC 72

(2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 25 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

GATCAAGCTT CATGAAATGC AGGTG 25

(2) INFORMATION FOR SEQ ID NO: 72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

CACCTGTGAG TTGACCCCTG TTG

23

(2) INFORMATION FOR SEQ ID NO: 73:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

ACAGGGGTCA ACTCACAGGT G

21

(2) INFORMATION FOR SEQ ID NO: 74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

GGCCTGTCGC ACCCAGTACA T

21

(2) INFORMATION FOR SEQ ID NO: 75:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

ATGTACTGGG TGCGACAGGC C

21

(2) INFORMATION FOR SEQ ID NO: 76:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

TGTGCTAGAG GACGTGTCAG C

21

(2) INFORMATION FOR SEQ ID NO: 77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

- (A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

GCTGACACGT CCTCTAGCAC A

21

(2) INFORMATION FOR SEQ ID NO: 78:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

- (A) NAME/KEY: PCR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

GGACTCACCT GAGGAGACGG T

21

- (2) INFORMATION FOR SEQ ID NO: 79:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 21 bases
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: oligonucleotide
 - (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

ACCGTCTCCT CAGGTGAGTC C

21

- B1
- (2) INFORMATION FOR SEQ ID NO: 80:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 21 bases
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: oligonucleotide
 - (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

CCTAGTCCTT CATGACCTGA A

21

- (2) INFORMATION FOR SEQ ID NO: 81:
- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: oligonucleotide
- (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

TTCAGGTCAT GAACGACTAG G

21

(2) INFORMATION FOR SEQ ID NO: 82:

- B1
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 bases
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: oligonucleotide
 - (ix) FEATURE:
 - (A) NAME/KEY: PCR primer
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

GATCGGATCC CTATAAATCT CTGGCC

26

(2) INFORMATION FOR SEQ ID NO: 83:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 761 bases
 - (B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

(A) NAME/KEY: Nucleotide sequence encoding LO-CD2a

V_L chain.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

B1

ATGATGAGTC CTGTCCAGTC CCTGTTTCTG TTATTGCTTT GGATTCTGGG TAAGTAGAGA	60
ATGAGTTACA GGACAAGAAT GGGGATGGAG GATGAGTTCT GACTGCCCAT GTTGGCTGTC	120
CATGTGTGGT AAGGCAGGTC CTATTTTCTA AGATGGACAC TTGAGATTCC ATTACTTGAT	180
AATGAGAAAT TACAGATGAG ATAGGATTTG TGCTAAGAGG ATTCTAATGT AGATGAGAAG	240
GTGTATGCCA TTTAGGATCT GCAACCGAAT TGTTTGTGA AAAAGCATTG GGTATATTTT	300
TTAAAAATCA CAAAACACAC CGGGATCTCA CAGGAAATGA GTAACAAAAA GTAATTCACA	360
AAGATTGGTT GCAAATTTTG CACATAACTT TGTCTGATC TATTATAATT TCAGGAACCA	420
ATGGTGATGT TGTGCTGACC CAGACTCCAC CTACTTTATT GGCTACCATT GGACAATCAG	480
TCTCCATCTC TTGCAGGTCA AGTCAGAGTC TCTTACATAG TAGTGGAAAC ACCTATTTAA	540
ATTGGTTGCT ACAGAGGACA GGCCAATCTC CACAGCCGCT AATTTATTTG GTATCCAAAC	600
TGGAATCTGG GGTCCCCAAC AGGTTCAAGT GCAGTGGGTC AGGAACAGAT TTCACACTCA	660
AAATCAGTGG AGTGGAAGCT GAGGATTTGG GGGTTTATTA CTGCATGCAA TTTACCCATT	720
ATCCGTACAC GTTTGGAGCT GGGACCAAGC TGGAAGTGAA A	761

(2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 132 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Chimeric LO-CD2a V_L Chain

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Met Met Ser Pro Val Gln Ser Leu Phe

-20

-15

Leu Leu Leu Leu Trp Ile Leu Gly Thr Asn

-10

-5

Gly Asp Val Val Leu Thr Gln Thr Pro

-1 +1

5

Pro Thr Leu Leu Ala Thr Ile Gly Gln Ser

10

15

Val Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu

20

25

Leu His Ser Ser Gly Asn Thr Tyr Leu Asn Trp

30

35

40

Leu Leu Gln Arg Thr Gly Gln Ser Pro Gln

45

50

Pro Leu Ile Tyr Leu Val Ser Lys Leu Glu

55

60

Ser Gly Val Pro Asn Arg Phe Ser Gly Ser

65

70

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

75

80

Ser Gly Val Glu Ala Glu Asp Leu Gly Val

85 90
Tyr Tyr Cys Met Gln Phe Thr His Tyr Pro
95 100
Tyr Thr Phe Gly Ala Gly Thr Lys Leu Glu
105 110
Leu Lys

(2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 491 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: oligonucleotide

(ix) FEATURE:

- (A) NAME/KEY: Nucleotide sequence encoding LO-CD2a

V_H chain.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

ATGAAATGCA GGTGGATCAT CCTCTTCTTG ATGGCAGTAG CTACAGGTAA GGCACCTCCA 60
AGTCCTAAAC TTGAGAGATC ATACACTTGG GAGACAGTGA CACTATCTTT GGATTTCTTT 120
CAACAGGGGT CAACTCAGAA GTCCAGCTGC AGCAATCTGG GCCTGAGCTT CAGAGACCCG 180
GGGCCTCAGT CAAGTTGTCTG TGCAAGGCTT CTGGCTATAT ATTTACAGAA TACTATATGT 240
ACTGGGTGAA GCAGAGGCCT AAACAGGGCC TGGAATTAGT AGGAAGGATC GATCCTGAAG 300
ACGGTAGTAT TGATTATGTT GAGAAGTTCA AAAAGAAGGC CACTTGACT GCAGATACAT 360
CGTCCAACAC AGCCTACATG CAACTCAGCA GCCTGACATC TGAGGACACA GCAACCTATT 420
TTTGTGCTAG GGGAAAATTC AACTATCGAT TTGCTTACTG GGGCCAAGGC ACCCTCGTCA 480
CAGTCTCCTC A 491

(2) INFORMATION FOR SEQ ID NO: 86:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 137 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Amino acid sequence of chimeric LO-
CD2a V_H chain.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Met Lys Cys Arg Trp Ile Ile Leu Phe Leu

-19 -15 -10

Met Ala Val Ala Thr Gly Val Asn Ser Glu

-5 -1 +1

Val Gln Leu Gln Gln Ser Gly Pro Glu

5 10

Leu Gln Arg Pro Gly Ala Ser Val Lys Leu

15 20

Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr

25 30

Glu Tyr Tyr Met Tyr Trp Val Lys Gln Arg

35 40

Pro Lys Gln Gly Leu Glu Leu Val Gly Arg

45 50

Ile Asp Pro Glu Asp Gly Ser Ile Asp Tyr

55

60

Val Glu Lys Phe Lys Lys Lys Ala Thr Leu

65

70

Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr

75

80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp

85

90

Thr Ala Thr Tyr Phe Cys Ala Arg Gly Lys

95

100

Phe Asn Tyr Arg Phe Ala Tyr Trp Gly Gln

105

110

Gly Thr Leu Val Thr Val Ser Ser

115

(2) INFORMATION FOR SEQ ID NO: 87:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 112 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Rat LO-CD2a light chain variable
region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Asp Val Val Leu Thr Gln Thr Pro Pro Thr

5 10

Leu Leu Ala Thr Ile Gly Gln Ser Val Ser

15 20

Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu

25 30

His Ser Ser Gly Asn Thr Tyr Leu Asn Trp

35 40

Leu Leu Gln Arg Thr Gly Gln Ser Pro Gln

45 50

Pro Leu Ile Tyr Leu Val Ser Lys Leu Glu

55 60

Ser Gly Val Pro Asn Arg Phe Ser Gly Ser

65 70

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

75 80

Ser Gly Val Glu Ala Glu Asp Leu Gly Val

85 90

Tyr Tyr Cys Met Gln Phe Thr His Tyr Pro

95 100

Tyr Thr Phe Gly Ala Gly Thr Lys Leu Glu

105 110

Leu Lys

(2) INFORMATION FOR SEQ ID NO: 88:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 112 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Humanized LO-CD2a light chain
variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

B1
Asp Val Val Met Thr Gln Ser Pro Pro Ser
5 10
Leu Leu Val Thr Leu Gly Gln Pro Ala Ser
15 20
Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu
25 30
His Ser Ser Gly Asn Thr Tyr Leu Asn Trp
35 40
Leu Leu Gln Arg Pro Gly Gln Ser Pro Gln
45 50
Pro Leu Ile Tyr Leu Val Ser Lys Leu Glu
55 60
Ser Gly Val Pro Asp Arg Phe Ser Gly Ser
65 70

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

75

80

Ser Gly Val Glu Ala Glu Asp Val Gly Val

85

90

Tyr Tyr Cys Met Gln Phe Thr His Tyr Pro

95

100

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu

105

110

Ile Lys

(2) INFORMATION FOR SEQ ID NO: 89:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 112 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Light chain variable region of
HUM5400

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Asp Val Val Met Thr Gln Ser Pro Leu Ser

5

10

Leu Pro Val Thr Leu Gly Gln Pro Ala Ser

15

20

Ile Ser Cys Arg Ser Ser Gln Ser Leu Val

25 30

Tyr Ser Asp Gly Asn Thr His Leu Asn Trp

35 40

Phe Gln Gln Arg Pro Gly Gln Ser Pro Arg

45 50

Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp

55 60

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser

65 70

B1 Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val

85 90

Tyr Tyr Cys Met Gln Gly Thr His Trp Pro

95 100

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu

105 110

Ile Lys

(2) INFORMATION FOR SEQ ID NO: 90:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 807 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polynucleotide

(ix) FEATURE:

(A) NAME/KEY: Nucleotide sequence encoding
humanized LO-CD2a light chain variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

bl

AAGCTTCATG ATGAGTCCTG TCCAGTCCCT GTTCTGTGTA TTGCTTTGGA TTCTGGGTAA	60
GTAGAGAATG AGTTACAGGA CAAGAATGGG GATGGAGGAT GAGTTCTGAC TGCCCATGTT	120
GGCTGTCCAT GTGTGGTAAG GCAGGTCCTA TTTTCTAAGA TGGACACTTG AGATTCCATT	180
ACTTGATAAT GAGAAATTAC AGATGAGATA GGATTTGTGC TAAGAGGATT CTAATGTAGA	240
TGAGAAGGTG TATGCCATTT AGGATCTGCA ACCGAATTGT TTTGTGAAAA AGCATTGTGGT	300
ATATTTTTTA AAAATCACAA AACACACCGG GATCTCACAG GAAATGAGTA ACAAAAAGTA	360
ATTCACAAAG ATTGGTTGCA AATTTTGCAC ATAACTTTGT TCTGATCTAT TATAATTTCA	420
GGAACCAATG GTGATGTTGT GATGACCCAG AGTCCACCTT CATTATTGGT AACCTTGGGA	480
CAACCAGCTT CCATCTCTTG CAGGTCAAGT CAGAGTCTCT TACATAGTAG TGGAAACACC	540
TATTTAAATT GGTGCTACA GAGGCCAGGC CAATCTCCAC AGCCGCTAAT TTATTTGGTA	600
TCCAAACTGG AATCTGGGGT CCCCAGACAGG TTCAGTGGCT CAGGGAGTGG AACAGATTTT	660
ACACTCAAAA TCAGTGGAGT GGAAGCTGAG GATGTGGGGG TTTATTACTG CATGCAATTT	720
ACCCATTATC CGTACACGTT TGGACAAGGG ACCAAGCTGG AAATCAAACG TGAGTAGAAT	780
TTAAACTTTG CTTCTCAGT TGGATCC	807

(2) INFORMATION FOR SEQ ID NO: 91:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 132 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Humanized LO-CD2a light chain
variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

Met Met Ser Pro Val Gln Ser Leu Phe Leu Leu

-20 -15 -10

Leu Leu Trp Ile Leu Gly Thr Asn Gly Asp

-5 -1 +1

Val Val Met Thr Gln Ser Pro Pro Ser

5 10

Leu Leu Val Thr Leu Gly Gln Pro Ala Ser

15 20

Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu

25 30

His Ser Ser Gly Asn Thr Tyr Leu Asn Trp

35 40

Leu Leu Gln Arg Pro Gly Gln Ser Pro Gln

45 50

Pro Leu Ile Tyr Leu Val Ser Lys Leu Glu

55 60

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser

65 70

Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

75 80

Ser Gly Val Glu Ala Glu Asp Val Gly Val

85 90
 Tyr Tyr Cys Met Gln Phe Thr His Tyr Pro
 95 100
 Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
 105 110
 Ile Lys

(2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 118 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS:
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

- (A) NAME/KEY: Rat LO-CD2a heavy chain variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu
 5 10
 Leu Gln Arg Pro Gly Ala Ser Val Lys Leu
 15 20
 Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr
 25 30
 Glu Tyr Tyr Met Tyr Trp Val Lys Gln Arg

35 40
 Pro Lys Gln Gly Leu Glu Leu Val Gly Arg
 45 50
 Ile Asp Pro Glu Asp Gly Ser Ile Asp Tyr
 55 60
 Val Glu Lys Phe Lys Lys Lys Ala Thr Leu
 65 70
 Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp
 85 90
 Thr Ala Thr Tyr Phe Cys Ala Arg Gly Lys
 95 100
 Phe Asn Tyr Arg Phe Ala Tyr Trp Gly Gln
 105 110
 Gly Thr Leu Val Thr Val Ser Ser
 115

(2) INFORMATION FOR SEQ ID NO: 93:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 118 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Humanized LO-CD2a heavy chain
variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

Gln Val Gln Leu Val Gln Ser Gly Ala Glu

5 10

Val Lys Lys Pro Gly Ala Ser Val Lys Val

15 20

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr

25 30

Glu Tyr Tyr Met Tyr Trp Val Arg Gln Ala

35 40

Pro Gly Gln Gly Leu Glu Leu Met Gly Arg

45 50

Ile Asp Pro Glu Asp Gly Ser Ile Asp Tyr

55 60

Val Glu Lys Phe Lys Lys Lys Val Thr Leu

65 70

Thr Ala Asp Thr Ser Ser Ser Thr Ala Tyr

75 80

Met Glu Leu Ser Ser Leu Thr Ser Asp Asp

85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Lys

95 100

Phe Asn Tyr Arg Phe Ala Tyr Trp Gly Gln

105

110

Gly Thr Leu Val Thr Val Ser Ser

115

(2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 123 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Human Amu 5-3 heavy chain variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Gln Val Gln Leu Val Gln Ser Gly Ala Glu

5

10

Val Lys Lys Pro Gly Ala Ser Val Lys Val

15

20

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr

25

30

Gly Tyr Tyr Met His Trp Val Arg Gln Ala

35

40

Pro Gly Gln Gly Leu Glu Trp Met Gly Arg

45

50

Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr

55 60

Ala Gln Lys Phe Gln Gly Arg Val Thr Met

65 70

Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr

75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp

85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Arg

95 100

Thr Glu Tyr Ile Val Val Ala Glu Gly Phe

105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr

115 120

Val Ser Ser

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 701 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polynucleotide

(ix) FEATURE:

(A) NAME/KEY: Nucleotide sequence encoding LO-
CD2a heavy chain variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

B1

AAGCTTCATG AAATGCAGGT GGATCATCCT CTTCTTGATG GCAGTAGCTA CAGGTAAGGC	60
ACTCCCAAGT CCTAAACTTG AGAGATCATA CACTTGGGAG ACAGTGACAC TATCTTTGGA	120
TTTCTTTCAA CAGGGGTCAA CTCACAGGTG CAGCTGGTGC AGTCTGGGGC TGAGGTGAAG	180
AAGCCTGGGG CCTCAGTGAA GGTCTCCTGC AAGGCTTCTG GATACACCTT CACCGAGTAC	240
TATATGTACT GGGTGCGACA GGCCCCTGGA CAAGGGCTTG AGCTGATGGG AAGGATCGAT	300
CCTGAAGACG GTAGTATTGA TTATGTTGAG AAGTTTAAGA AAAAGGTCAC CCTGACCGCT	360
GACACGTCCT CTAGCACAGC CTACATGGAG CTGAGCAGCC TGACCTCTGA CGACACGGCC	420
GTGTATTACT GTGCGAGAGG AAAGTTTAAC TATAGGTTTG CTTACTGGGG CCAAGGAACC	480
CTGGTCACCG TCTCCTCAGG TGAGTCCTTA CAACCTCTCT CTTCTATTCA GCTTAAATAG	540
ATTTTACTGC ATTTGTTGGG GGGGAAATGT GTGTATCTGA ATTTCAGGTC ATGAAGGACT	600
AGGGACACCT TGGGAGTCAG AAAGGGTCAT TGGGAGCCCG GGCTGATGCA GACAGACATC	660
CTCAGCTCCC GGACTTCATG GCCAGAGATT TATAGGGATC C	701

(2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 137 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS:

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: polypeptide

(ix) FEATURE:

(A) NAME/KEY: Humanized LO-CD2a heavy chain
variable region.

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

Met Lys Cys Arg Trp Ile Ile Leu Phe Leu

-19 -15 -10
 Met Ala Val Ala Thr Gly Val Asn Ser Gln
 -5 -1 1
 Val Gln Leu Val Gln Ser Gly Ala Glu
 5 10
 Val Lys Lys Pro Gly Ala Ser Val Lys Val
 15 20
 Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
 25 30
 Glu Tyr Tyr Met Tyr Trp Val Arg Gln Ala
 35 40
 Pro Gly Gln Gly Leu Glu Leu Met Gly Arg
 45 50
 Ile Asp Pro Glu Asp Gly Ser Ile Asp Tyr
 55 60
 Val Glu Lys Phe Lys Lys Lys Val Thr Leu
 65 70
 Thr Ala Asp Thr Ser Ser Ser Thr Ala Tyr
 75 80
 Met Glu Leu Ser Ser Leu Thr Ser Asp Asp
 85 90
 Thr Ala Val Tyr Tyr Cys Ala Arg Gly Lys
 95 100
 Phe Asn Tyr Arg Phe Ala Tyr Trp Gly Gln
 105 110

Gly Thr Leu Val Thr Val Ser Ser

115